Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal

Section 1. General administrative information

Burns Paiute Mitigation Coordinator

Bonneville project number, if an ongoing project 9130

Business name of agency, institution or organization requesting funding
Burns Paiute Tribe

Business acronym (if appropriate) BPT

Proposal contact person or principal investigator:

Name Haace St. Martin
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Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name

NPPC Program Measure Number(s) which this project addresses.
Section 11, secifically measures 11.D,11.3B and 113E. Section 7, measure7.6

NMFS Biological Opinion Number(s) which this project addresses.

Other planning document references.
Oregon trust Agreement Planning Project, perpared by Oregon wildlife Managers for Bonneville Power Administration project # 92-84 BPA , Assessing Oregon Trust Agreement Planning project using GAP analysis; perpared by ODFW for BPA; Status of the interior Columbia Basin: summary of scientific finding, USDA Forest Service, ODFW District Wildlife Managerment Plans.

Subbasin.
Malheur River subbasin

Short description.
Develop wildlife mitigation stategies consisting of selection, scientific analysis, implementation (acquisition, enhancement, etc.), O&M, and evalution of wildlife Mitigation projects for the Burns Paiute Tribe.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
	Anadromous fish		Construction	+	Watershed
+	Resident fish		O & M		Biodiversity/genetics
X	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research		Ecosystems
	Climate	+	Monitoring/eval.		Flow/survival
	Other	+	Resource mgmt		Fish disease
		X	Planning/admin.		Supplementation
			Enforcement	X	Wildlife habitat en-
		+	Acquisitions		hancement/restoration

Other keywords.
Planning & Coordination

Section 3. Relationships to other Bonneville projects

Project #		Nature of relationship
9705900		Planning & coordination
9701900	Stinkingwater Salmonid Project	Fisheries project sponsored by BPT in the same watershed

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Coordinate & develop mitigation plans	a	Secure mitigation sites for the Burns Paiute Tribe.

		b	Evaluate and Prioritize habitat mitigation opportunities for tribal, and state plans, the WWG ranking criteria & GAP analysis
2	Develop and implement statewide mitigation strategies based upon sound biological and technical principles.	a	Maintain "active " list of potential project implementation prioritization.
		b	Evaluate and Prioritize habitat mitigation opportunities utilizing federal, tribal, and state plans, the WWG ranking criteria & GAP analysis
3	Develop MOA between the oregon Wildlife Managers to guide coordination, implementation, and planning.	a	Integrate technical, administrative and policy issues associated with timely and effective implemetation of coordinated statewide wildlife of mitigation into a Memorandum of Agreement for Policy signing.
		b	Secure full Policy review and approval and submit the signed document to BPA and NPPC as formal documentation of Oregon Wildlife Manager's concurrence on process for coordination and implementation.
4	Cooperate in the development and implementation of mitigation projects in the State of Oregon.	a	Coordinate project planning and implementation for Managers to increase efficience and reduce duplication of effort.
		b	Provide technical coordination and support for Managers includin aspects such as conducting Procedures on project.
		c	Develop and implement a consistant state-wide monitoring & evaluation program.
		d	Develop and implement coordinated public outreach strategies.
5	Establish and manage Oregon Project Implementation Funding Vehicle to provide the flexibility and security required	a	Develop funding process and interim agreement with BPA, consistent with Section 11.3d of the NPPC Fish and wildlife

	to meet changing financial and project implementation scenarios		program.
		b	Establish Oregon Mitigation Fund with associate investment policy.
		c	Coordinate development and approval of Annual project budjets for Oregon Fund..

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	1/1998	1/2003	20.00%
2	1/1998	1/2003	20.00%
3	1/1998	1/2003	40.00%
4	1/1998	1/2003	40.00%
			TOTAL 120.00%

Schedule constraints.
Delays due to extensive landowner negotiatonsans slow resonse time from the regulatory agencies regarding issuance of permits for proposed in-stream work.

Completion date.
N/A On going project.

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel	22,050	$23,153
Fringe benefits	5,513	$5,789
Supplies, materials, non-expendable property	3715	$3,715
Operations & maintenance	0	$0
Capital acquisitions or improvements (e.g. land, buildings, major equip.)	0	$0
PIT tags	# of tags: 0	$0
Travel	3,624	$3,624
Indirect costs	9,000	$9,000
Subcontracts	0	$0

Other	0	$0
TOTAL		$45,281

Outyear costs

Outyear costs	**FY2000**	**FY01**	**FY02**	**FY03**
Total budget	$47,000	$48,500	$50,000	$0
O&M as % of total	0.00%	0.00%	0.00%	

Section 6. Abstract

The long-term goal of this project is full mitigation of all losses to wildlife in Oregon as a result of the development and operation of the federal Columbia Basin hydropower system. Under the Council's Fish and Wildlife Program, this means providing Habitat Units (HU's) of the highest priority habitat types for target species in a sustainable, cost-effective manner so that Bonneville receives mitigation credit.

Since 1991 Oregon's wildlife managers have been working together to coordinate the planning, selection and implementation of BPA funded wildlife projects under the NW Power Planning Council's Fish and Wildlife Program as outlined in Sections 7 and 11, specifically measures 7.6, 11.2D, 11.3E and 11.3F.

The intent of this on-going project is twofold. First to facilitate coordination and planning between Oregon wildlife managers via individual funding of wildlife planning and coordination staff for each OWC member. This varies by need of the individual entity, and should remain stable or decline as mitigation goals are attained. The GAP Analysis, along with other federal, state and tribal wildlife mitigation plans are used by the OWC to evaluate potential projects. Projects selected are given further scientific, policy and economic review, and those agreed upon by the OWC are brought forth to the WWG and the Council for approval, leading to funding by Bonneville. The second component of this project is implementation of the wildlife mitigation projects that have come through the above process. This will include acquisitions, easements, enhancement and O&M.

In 1991 the Oregon Trust Agreement (OTA) Planning Project was initiated by Oregon's wildlife managers to bring Oregon wildlife managers together to develop an Oregon trust similar to what was done in Montana and Washington. This effort resulted in the "Brown Book" which identified and assessed potential wildlife mitigation opportunities throughout Oregon. Later, this effort was refined via a statewide GAP analysis, a Bonneville funded research project used to reevaluate the previously identified wildlife mitigation sites and identify new sites. The results of this project, as well as other federal, state and tribal wildlife management plans, are being used in this current phase to select, evaluate and implement wildlife mitigation opportunities in Oregon.

Oregon's wildlife managers, working within the Wildlife Working Group (WWG), have developed a budget for Bonneville dollars to implement Oregon wildlife mitigation projects through the year 2001. Initially funds were used for coordination and planning; in FY98, FY99 and beyond, the majority of funds will be used for implementation projects. Oregon's wildlife managers believe that the attached implementation projects are the result of a rigorous planning

process. They have been evaluated using tested, regionally accepted scientific methods and criteria. They have been reviewed closely for consistency with the Council program, existing federal, state and tribal wildlife management plans, BPA Wildlife and Watershed Programmatic EIS's, etc. Their potential to provide the highest priority HU's in an economical and fiscally responsible manner has been assessed and reviewed. It is important to note that most of the implementation projects proposed build upon existing activities: whether by expansion or enhance of existing wildlife areas, tying into regional programs like Metro Greenspaces, or complementing existing Bonneville funded watershed and wildlife projects.

Oregon's wildlife managers understand that while the proposed implementation projects are some of the best wildlife mitigation opportunities in Oregon, not all of them may be implemented for a variety of reasons. Additionally, new sites may be identified that are equal or better than those proposed and require immediate action to secure. In light of this the managers will continually review and monitor the database of existing sites, but more importantly, will work with Bonneville to develop a funding arrangement that will provide Oregon's wildlife managers the flexibility to respond appropriately.

Initial HEP estimates have or will be taken on all sites identified by the planning process. Once sites are acquired or under management, a full baseline HEP analysis for current and potential HU's will be taken and agreed to by the project proponents and Bonneville. Throughout the life of this project, HEP analysis will be done regularly to ensure Bonneville and the region that contracted habitat goals are met. Additionally, Oregon's wildlife managers will work with the WWG to develop monitoring protocols for populations of target and non-target species, as called for by the ISRP.

Section 7. Project description

a. Technical and/or scientific background.

1. Council program

The Council's Fish and Wildlife Program is very clear in stating that construction and operation of the federal Columbia Basin hydropower system is a cause of habitat loss for wildlife, and that it is Bonneville's responsibility to mitigate for those losses. The losses due to construction have been assessed, independently audited and verified (see report by Beak Consultants), and adopted into the Council program. These losses include losses of HU's for all major wildlife species at each hydro project, and have been prioritized by habitat types with target species. The Council wildlife program goal is to "fully mitigate for wildlife losses from hydropower in the Columbia River Basin." Specifically the program says "The goal of this program's wildlife strategy is to achieve and sustain levels of habitat and species productivity as a means of fully mitigating wildlife losses…" Acquisition of HU's is the Council's "preferred method" for wildlife mitigation. This can be done either by habitat acquisition via purchase or easement, or enhancement of existing habitat to provide additional HU's (if possible). The implementation component of this project consists of specific implementation projects to provide HU's of the highest possible priority habitat type for target species to provide crediting to Bonneville for documented hydropower losses.

In addition to the Council program, the assessments and calculations of wildlife losses mitigation credits are found in multiple documents written over a period of six years (Bedrossian et. al.

1985; Noyes et. al. 1985a, 1985b, 1985c, 1985d, 1986; Preston et. al. 1987; Rasmussen and Wright 1990a, 1990b, 1990c, 1990d).

The Council program is also very clear in calling for Bonneville to develop short-term interim five-year agreements with wildlife managers, specifically the state of Oregon and the appropriate Indian tribes. In the eyes of the OWC, this project, fully funded through 2001 as budgeted by the WWG, may be a way for Bonneville to meet this goal. Additionally it will provide the framework to reach the Council's goal of Bonneville developing long-term agreements for all wildlife mitigation in Oregon.

2. GAP analysis

The Bonneville Power Administration (BPA) GAP Project was conducted by the Oregon Department of Fish and Wildlife (ODFW) Wildlife Diversity Program. This project drew from the efforts of the Oregon Trust Agreement Planning Project (OTAP). Both projects were funded by BPA through the Northwest Power Planning Council (NWPPC) fish and wildlife mitigation program.

The BPA GAP project developed a series of databases and Geographic Information System (GIS) data layers which may be used for potential mitigation projects evaluation by the Oregon Wildlife Coalition (OWC) members. Combined with the findings of the OTAP a suitability analysis determined which projects were suitable for BPA mitigation and which remaining projects could be implemented in the near future. Multiple queries of landscape level GIS data were conducted as part of the GAP analysis portion of the project. The results characterize the potential contribution to the mitigation target species and habitats. In addition, the role a project might play in conservation planning, within the range of habitat types and conditions statewide, was determined.

Some methods and data were borrowed from existing conservation mapping and planning efforts while others were created. Results which included ordering of projects, based on the GIS queries, is attached as tabular appendices to this report. Digital information is also available. Future work conducted by the OWC will involve the refinement of existing information and the generation of new projects based on criteria and methodology developed during this project.

Introduction

In 1980, Congress passed the Pacific Northwest Electric Power Planning and Conservation Act. This act, in part, mandates that mitigation is to occur for fish and wildlife losses resulting from the construction and operation of federally licensed hydroelectric facilities in Montana, Idaho, Washington, and Oregon. The act also established and charged the Northwest Power Planning Council (NWPPC) with the development of a comprehensive fish and wildlife mitigation program. The Bonneville Power Administration (BPA) is responsible for implementation of the NWPPC fish and wildlife program funding recommendations.

In October of 1995 the project known as Assessing Oregon Trust Agreement Planning Project Priorities Using GAP Analysis, hereafter referred to as BPA GAP, was initiated by the Oregon Department of Fish and Wildlife under contract with the BPA for the NWPPC mitigation program. Cooperators included the Oregon Natural Heritage Program (ONHP), the Confederated Tribes of the Warm Springs Reservation in Oregon (CTWSR), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Burns Paiute Tribe (BPT), and the U.S. Fish and Wildlife Service (USFWS). Oversight, historical perspective and additional project facilitation was provided by both the BPA and NWPPC. This project was considered an assessment and refinement of the Oregon Trust Agreement Planning Project (OTAP) which was completed in

1993 (BPA 1993).
Prior work, conducted during the OTAP, involved the identification of potential mitigation projects which were proposed to offset the losses caused by the construction of the four lower Columbia River and the eight Willamette River basin hydroelectric facilities. The assessments and calculations of wildlife losses mitigative credits are found in multiple documents written over a period of six years (Bedrossian et. al. 1985; Noyes et. al. 1985a, 1985b, 1985c, 1985d, 1986; Preston et. al. 1987; Rasmussen and Wright 1990a, 1990b, 1990c, 1990d). The current project drew from and enhanced the previous efforts through the use of a GIS and GAP Analysis.

The Precursor: The Oregon Trust Agreement Planning Project

The BPA determined that beginning in 1992 so-called "wildlife trust agreements" would be pursued with the wildlife management agencies of each state. These agreements were intended to take the place of the annual project submittal and approval process which, by 1993, had resulted in only three wildlife projects implemented region-wide. The trust agreements between the BPA and each state would include signatories from each tribe and agency responsible for implementing mitigation measures within the respective states. In order to develop an effective trust agreement it was necessary to determine what the mitigation objectives of the agreement would be and the economic costs of achieving those objectives. The wildlife managers and tribes in Oregon chose to develop the implementation team known as the Oregon Wildlife Coalition (OWC) and the OTAP as the means of achieving those objectives.
The OTAP consisted of two parts. The first was the compilation of a database, which contained information about potential mitigation sites. This information originated from OWC project sponsors, various tribal and state management and mitigation plans, and the Oregon Natural Heritage Database. The second component of the OTAP consisted of gathering land values from recent land sales and appraisals within the geographic areas and habitat types where mitigation activities were likely to occur. A range of potential trust agreement costs was also calculated. This range was based upon the assumption of complete mitigation for the wildlife losses in Oregon.
The BPA GAP Project used the database component of the OTAP as a baseline information source for the purposes of analysis. The economic valuation information was not used for the GAP analysis but a current version of similar information is being compiled by the regional Wildlife Working Group (WWG) for project evaluation. Additionally, new economic information will most likely be incorporated in fiscal year 1998 during the implementation phase of the BPA GAP Project. It is noteworthy the BPA has determined that "wildlife trust agreements" are no longer considered the preferred method of developing statewide agreements.

2. The Oregon Trust Agreement Planning Project and the GAP analysis:

The BPA Oregon Trust Agreement Planning Project (OTAP) was initiated in 1992 by the OWC to create a list of potential wildlife mitigation opportunities by priority, and to attempt to determine the costs of mitigating wildlife losses in Oregon. The end result of this project was the "Brown Book", which identified 287 potential sites from over 500 reviewed, using Council and OWC developed criteria as a basis for evaluating priority (please see Methods section). This information originated from OWC project sponsors, various tribal and state management and mitigation plans, and the Oregon Natural Heritage Database. At the time of completion these potential sites were "available", and the OWC had developed cost estimates for general habitats within the mitigation area, based on estimates from certified appraisers. The findings of the "Brown Book", and it's corresponding database, lay somewhat dormant until 1995 (please see History).

Starting in 1995, at the request of Bonneville, the "Assessing Oregon Trust Agreement Planning Project Using GAP Analysis" project was conducted by the ODFW Wildlife Diversity Program. The project purpose was to assess the findings of the Brown Book, upgrade and provide more detailed information on the 287 previously identified sites (and to include any new sites that had since been identified), and to develop more refined methods to evaluate the project potential contribution to the mitigation of target species and habitat. Additionally, the role a project might play in conservation planning, within the range of habitat types and condition statewide, was determined. Specifically**,** the primary goal of this project was to prioritize and depict the contribution of each proposed mitigation site to target species and habitats as well as overall bio-diversity in the state and/or eco-region within which it is found. **It is important to note that the primary objective of the mitigation program is to mitigate for habitats and species lost through construction. That objective is met and often exceeded when potential mitigation sites are selected using a GAP analysis.**

The GAP project developed a series of databases and Geographic Information System (GIS) data layers, a tool used by the OWC to evaluate potential mitigation projects. Combined with the findings of the OTAP, a suitability analysis determined which projects were suitable for BPA mitigation now and which remaining projects could be implemented in the near future. Multiple queries of landscape level GIS data were conducted as part of the GAP analysis portion of the project. The results characterized the potential contribution to the mitigation target species and habitats. Future work by the OWC has and will involve the refinement of existing information and the generation of new projects based on criteria and methodology developed during this project.

Please see the Methods part of this section for specific information on GAP analysis and the criteria.

b. Proposal objectives.

Two objectives:

1. Coordination and planning of wildlife mitigation in Oregon by Oregon wildlife managers Oregon's wildlife managers will develop an agreement between themselves to guide coordinated implementation and planning. They will secure full policy review and approval and submit the signed document to Bonneville and the Council as formal documentation of Oregon's wildlife managers' concurrence on process for coordinated state-wide project implementation.

The managers will develop and implement statewide mitigation strategies based upon sound biological and technical principles. They will maintain "active" list of potential projects for implementation prioritization and continue to evaluate and prioritize habitat mitigation opportunities utilizing federal, tribal, and state plans, WWG, Council and/or ISRP project criteria, the Oregon GAP analysis, etc.

Oregon's wildlife managers agree to cooperate in the development and implementation of mitigation projects in the State of Oregon. They will coordinate project planning and implementation to increase efficiencies and reduce duplication of process. They will provide technical coordination and support for the all wildlife managers, including aspects such as conducting Habitat Evaluation Procedures (HEP) on projects. A statewide monitoring and

evaluation program and coordinated public outreach and involvement strategies will be developed and implemented.

The managers will establish and manage an "Oregon Projects Implementation Funding Vehicle" to provide the flexibility and security required to meet changing financial and project implementation scenarios. They will develop a funding process and interim agreement with BPA consistent with Section 11.3D of the Council Fish and Wildlife Program and establish an Oregon Mitigation Fund with associated investment policy. Finally the managers will coordinate development and approval of Annual Project Budgets for use of the Oregon Fund.

2. Implementation of wildlife mitigation activities

The overall objective of the implementation projects proposed is to provide HU's of highest priority habitat type for target species for Bonneville crediting, as called for in the Council's Fish and Wildlife Program. Please see the individual implementation project proposals for specific detail.

c. Rationale and significance to Regional Programs.

This project is consistent with all known local, state, federal, and tribal laws. The NWPPC has approved similar projects in Oregon and other states. BPA has sucessfully implemented several projects in Oregon in the last seven years. The project is covered under the BPA Wildlife and Watershed Programmatic EIS documents (BPA 1997b, BPA 1997c, BPA 1997a). The project is consistent with several areas of the Council's Fish and Wildlife Program. Specifically, it is consistent with Section 7.6 of the FWP which calls for watershed based habitat restoration focusing on protecting of wild and natural populations. It is also consistent with Section 11 of the Program which identifies wildlife resource needs. See project scientific/technical background and history sections.

d. Project history

The project number 975900, Securing Wildlife Mitigation Sites- Oregon. This project is part of 975900 but it has retained it individual project number 5519400.
This position was funded 1995 so that the Burns Paiute Tribe could be fully involved in the SOR and the NPPC Fish and Wildlife Program. The Mitigation Coordinator (MC) reports quarterly to Bonneville Power Administration. The MC started and promoted the Burns Paiute Tribe's fishery proposal. The Stinkingwater Salmonid project does life history on Redband and bull trout in the Middle Fork Malheur River. Genetic sampling of the Redband trout and bull trout. Bull trout was eliminated from genetic sampling because ODFW felt that there had been enough sampling done on the Malheur River population.
The history of this project is two-fold: first is the history of Bonneville wildlife mitigation efforts, to give the reviewer an understanding of project structure and how it fits within the regional program. Second is the history of Oregon's efforts to work with Bonneville, the Council and the Wildlife Working Group (CBFWA Wildlife Caucus) to give the reviewer an understanding of how the project developed, current status and funding assumptions. This includes a history of the Oregon Trust Planning Project and GAP Analysis.

Wildlife Rule: In November 1989, the Council took up wildlife mitigation for most of the

remaining federal hydroelectric projects in the Columbia River basin. Because there was widespread disagreement about the loss estimates and the hydropower share of those losses, the Council did not make any determination about the total mitigation due at any of these projects. Instead, the Council amended the Program to include a wildlife mitigation goal of achieving 35% of the agency-submitted losses during the next decade, using the agency estimates as a "starting point".

The Wildlife Rule established a two-track process (including project specific criteria) for implementation of wildlife projects. One track called for projects to be submitted to Bonneville under the Implementation Planning Process. Once projects are reviewed and selected for inclusion in the Bonneville Annual Implementation Workplan the Council's Wildlife Advisory Committee reviews them. The other track permits agreements if agreed to by all parties for a particular facility.

Oregon Wildlife Coalition

In 1991 the Oregon Wildlife Coalition (OWC) was formed made up of wildlife managers from the Oregon Department of Fish & Wildlife (ODFW), the Confederated Tribes of the Warm Springs Reservation in Oregon (CTWSRO), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Burns-Paiute Tribe (BPT), and the US Fish and Wildlife Service (USFWS). The Coalition developed proposals to address Bonneville concerns for having an "outcomes" based approach and then submitted a proposal for an Oregon planning process to the Council later that year. From fall of 1991 to June of 1992 the OWC negotiated with Bonneville over funding the proposal, which in July of 1992 became the Oregon Trust Agreement (OTA) Planning Project (BPA #92-84).

In October of 1993, after a year of development the OWC publishes an Oregon planning document, the "Brown Book". Then in January of 1994 they begin meeting to formulate a strategy for trust negotiations with Bonneville and in February the Coalition requests in writing that Bonneville begin negotiations. This met the Council's deadline for trying to get to interim agreements within 90 days after the rule went into effect. In March Bonneville responds positively and identifies its' lead negotiators.

Between April and July five coalition sessions were held; Bonneville attended 3 of those meetings. At the initial meeting it was agreed that the parties would develop principles of negotiation. The parties exchanged documents on these issues and agreed that the negotiations should initially focus on technical issues that would define the biological basis for mitigation before the issue of money was to be discussed. Bonneville negotiators agreed to this strategy. It was agreed that the focus of the discussions would be the "Brown Book" losses and the Oregon mitigation planning proposal. It was proposed that a technical committee, including both Bonneville staff and coalition members would work together to develop the technical proposal. Bonneville stated that they would have to get the administrators concurrence before they could commit to such a procedure. The process then broke down when it became apparent that no funds would be available and that Bonneville was moving away from trusts. The coalition stopped meeting for over a year.

During these years the Council's wildlife advisory group had become the Wildlife Working Group (WWG, and also the CBFWA Wildlife Caucus), made up of all the wildlife managers in the Columbia Basin. They meet regularly to help implement the Council's wildlife rule and in doing so developed, reviewed and adopted habitat assessment tools and strategies. Once it became apparent from the Council's 1995 rule-making and the MOA negotiations that wildlife

funding would become stable at approximately $15M per year through 2001, the WWG started discussions of both long- and short-term funding for future wildlife mitigation in the Basin. Various strategies were discussed, but all agreed that Oregon had not received a reasonable share of funds spent to date. In the end a budget was developed and adopted by the WWG covering Bonneville funds through 2001 (attached). This budget called for Oregon's wildlife mitigation to receive $275K in FY97, $500K in FY98, $4M in FY99, $5M in FY00 and $6M in FY01. The first two years are for planning and coordination, the next three for project implementation.
In helping develop this budget as members of the WWG, Oregon's coalition members agreed to come together once again to start developing strategies on how best to implement wildlife mitigation in Oregon. Also at this time a project to reaffirm the original findings of the OTA Planning Project was completed. This project, Assessing Oregon Trust Agreement Planning Process Using GAP Analysis (BPA #95-65), provided a more rigorous scientific/policy filter on the sites originally identified in the "Brown Book" and demonstrated the validity and applicability of that effort.
The OWC has met continually since this time and developed coordination and planning budget for FY97, which due to contracting problems was not, initiated until fall of 1997. This allowed the entities involved to provide staff dedicated to this planning and implementation effort. For FY98, since much of the coordination for this year was using FY97 funds, the coalition developed and proposed the initiation of a small group of projects scattered throughout the state along with some continued funding of planning and coordination. For the current year specific project areas have been identified for purchase, enhancement or O&M along with a small coordination budget.

e. Methods.

1. For selecting implementation projects:

OTAP: The OTAP consisted of two parts. The first was the compilation of a database which contained information about potential mitigation sites. The second component of the OTAP consisted of gathering land values from recent land sales and appraisals within the geographic areas and habitat types where mitigation activities were likely to occur. The information originated from OWC project sponsors, various tribal and state management and mitigation plans, and the Oregon Natural Heritage Database. A range of potential acquisition costs was also calculated. This range was based upon the assumption of complete mitigation for the wildlife losses in Oregon.

Criteria developed by the Council, as well as the OWC, are used to evaluate each site to determine a baseline mitigation potential. Please see the Brown Book for further detail regarding these criteria.

ASSESSING OTAP: The primary goal of the project was to prioritize and depict the contribution of each proposed mitigation site identified in OTAP to target species and habitats as well as overall biodiversity in the state and/or ecoregion within which it is found. **It is important to note that the primary objective of the mitigation program is to mitigate for habitats and species lost through construction. That objective can be met and exceeded when potential mitigation sites are selected using a GAP analysis.**

GAP Analysis: The National GAP Analysis Project began in 1988 with the states of Idaho and

Oregon. It was coordinated by the USFWS from the Washington D.C. office (Scott and LaRoe 1993; Pennisi 1993). Today the U.S. Geological Survey spearheads the effort with over 200 collaborating organizations including businesses, universities, and local, state, and federal governments representing 32 states (Scott 1994).

One of the primary objectives of the project includes establishing ecological and social datasets, based on geographic location within each state, which will eventually lead to an analysis of the health and degree of "protectedness" of biodiversity in the United States (Scott et. Al. 1993; Machlis et. Al. 1994). Thus, the term GAP refers to the gaps in protection designed for the biological ecosystems upon which all life is dependent. The fundamental unit of analysis and protection is the vegetation or habitat type. The vegetation/habitat types are considered catalysts and therefore predictors of wildlife occurrence and in general, biodiversity itself.

The GAP project is considered a proactive rather than reactive form of focusing and directing land management activities. Traditional wildlife management has dealt with individual species and often only after the species has reached an elevated level of peril (Scott 1994). In many cases the management or protection comes only after the species has been designated as "at risk of extinction" (Forman and Gordon 1986; Harris 1984). Reactive management is costly, narrowly focused (often a single species), occurs relatively frequently, species in the same habitat type are dealt with separately (eg. spotted owl and marbled murrelet), and in some cases may occur too late (eg. Snake River sockeye salmon).

The information compiled and generated by the GAP Analysis program is intended to be used for the development of a biodiversity management plan. This approach also differs from historic management by considering common as well as rare species through the realization that all species are equally worthy of management and protection (Scott 1994). Rather than waiting for complex ecological, social, and economic problems, which may drive species near to extinction, GAP gathers the known information about communities and the nature of their protection before it is too late. This allows land managers to 1) assess the current land management situation, 2) identify important areas in need of further research, 3) develop and analyze management options, and 4) take steps towards insuring protection of biodiversity before additional species become threatened or endangered with extinction.

The BPA GAP Project adopted many of the techniques and objectives of the national program described above. New methods were also developed which may assist with similar activities in the future. It is hoped that through the use of these tools the BPA wildlife mitigation projects in Oregon will continue to be planned using the most current scientific method available. And while providing necessary credits to BPA for the wildlife losses a robust network of protected areas will be dedicated to complement existing refugia for target species and others.

HEP: Habitat Evaluation Procedures (HEP) will be used to obtain HU's to provide mitigation credit to Bonneville. Each specific implementation project will use HEP and various enhancement, restoration or management techniques to provide and/or maintain habitat units as contracted with Bonneville. Please see specific implementation project proposals for specific detail of the methods to be used for individual projects.

f. Facilities and equipment.

The Burns Paiute tribe currently has office space for this project. Bonneville Power

Administration has already supplied computer. The current Bonneville Power Administration contract covers salary, travel, and administrative cost to support the mitigation coordinator position. The coordination and planning component of this project does not require any new facilities or equipment. Each specific implementation project will provide a detailed breakdown of the facilities and/or equipment necessary to fully implement that project.

g. References.

Beak Consultants, Incorporated, 1993. Audit of wildlife loss assessments for federal dams on the Columbia River and its tributaries. Prepared for the Northwest Power Planning Council, Portland, OR.

Bedrossian, K.L., J. H. Noyes and M.S. Potter. 1985. Wildlife and Wildlife Habitat Loss Assessment at Lookout Point Dam and Reservoir Project Middle Fork Willamette River, Oregon. Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Bonneville Power Administration. 1993. Oregon Trust Agreement Planning Project: Potential Mitigation

to the Impacts on Oregon Wildlife Resources Associated with Relevant Mainstem Columbia River and Willamette River Hydroelectric Projects. DOE/BP-90299-1. Bonneville Power Administration, U.S. Department of Energy, Portland, OR.

Bonneville Power Administration 1997a. Watershed Management Program Final Environmental Impact Statement. DOE/EIS - 0265. Bonneville Power Administration, Portland, OR

Bonneville Power Administration 1997b. Wildlife Mitigation Program Final Environmental Impact Statement. DOE/EIS - 0246. Portland, OR

Bonneville Power Administration 1997c. Wildlife Mitigation Program Record of Decision. DOE/EIS - 0246. Bonneville Power Administration, Portland, OR

Columbia River Inter-Tribal Fish Commission 1995. Wy-Kan-Ush-Mi-Wa-Kish-Wit: The spirit of the salmon. Columbia River Intertribal Fish Commission, Portland, OR

Csuti, B., A.J. Kimerling, T.A. O'Neil, M.M. Shaughnessy, E. Gaines, M.M.P. Huso. 1997. *Atlas of Oregon Wildlife: distribution, habitat, and natural history*. Oregon State University Press, Corvallis, OR.

Forman, R.T. and M. Gordon. 1986. Landscape Ecology. John Wiley and Sons, New York, NY.

Harris, L.D.. 1984. The Fragmented Forest: Island Biogeography Theory and the Preservation of Biotic Diversity. University of Chicago Press, Chicago, IL.

Interior, U. S. D. 1980. Habitat as a Basis for Environmental Assessment. ESM 101, Release 4-80. U. S. Fish and Wildlife Service, Division of Ecological Services, Washington, D.C.

Machlis, G., D. Forester, and J. McKendry. 1994. Gap analysis and the National Parks: adding the socioeconomic dimension. Park Science. National Park Service, U.S. Department of the Interior.

Northwest Power Planning Council 1994. Columbia River Basin Fish and Wildlife Program. NPPC 94-55. Northwest Power Planning Council, Portland, OR.

Noyes, J.H., M.S. Potter and K.L. Bedrossian. 1985a. Wildlife and Wildlife Habitat Loss Assessment at Detroit and Big Cliff Dam and Reservoir Project North Santiam River, Oregon. Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Noyes, J.H., M.S. Potter and K.L. Bedrossian. 1985b. Wildlife and Wildlife Habitat Loss Asessment at Dexter Dam and Reservoir Project Middle Fork Willamette River, . Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Noyes, J.H., M.S. Potter and K.L. Bedrossian. 1985c. Wildlife and Wildlife Habitat Loss Assessment at Hills Creek Dam and Reservoir Project Middle Fork Willamette River, Oregon. Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Noyes, J.H., M.S. Potter and K.L. Bedrossian. 1985d. Wildlife and Wildlife Habitat Loss Assessment at Cougar Dam and Reservoir Project South Fork McKenzie River, Oregon.Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Noyes, J.H., M.S. Potter and K.L. Bedrossian. 1986. Wildlife and Wildlife Habitat Loss Assessment at Green Peter-Foster Project Middle Fork Santiam River, Oregon. Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Oregon Department of Fish and Wildlife 1997. Assessing Oregon Trust Agreement Planning Project
Using GAP Analysis. In fullfillment of Project Number 95-65, Contract Number DE-BI179-92BP90299. Prepared for: U.S. Bonneville Power Administration; Project Cooperators: U.S, Fish and Wildlife Service, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, Burn Paiute Tribe, Oregon Natural Heritage Program, Portland, OR.

Orr, E. L., W. N. Orr, and E. M. Baldwin. 1976. *Geology of Oregon*. Kendall/Hunt Publishing, Dubuque,
IA.

Pennisi, E. 1993. Filling in the gaps. Science News, Vol 144.

Preston, S., Noyes, J., and Potter, M. 1987. A wildlife habitat protection, mitigation, and enhancement
plan for eight federal hydroelectric facilities in the Willamette River Basin .Prepared by Oregon Department of Fish and Wildlife for U.S. Department of Energy, Bonneville Power Administration, Portland, OR.

Rasmussen, L. and P. Wright. 1990a. Wildlife impact assessment, Bonneville Project, Oregon and
Washington. Prepared by U.S. Fish and Wildlife Service for U.S. Dept. Of Energy, Bonneville Power Administration, Portland, OR.

Rasmussen, L. and P. Wright. 1990b. Wildlife impact assessment, McNary Project, Oregon and Washington. Prepared by U.S. Fish and Wildlife Service for U.S. Dept. Of Energy, Bonneville Power Administration, Portland, OR.

Rasmussen, L. and P. Wright. 1990c. Wildlife impact assessment, John Day Project, Oregon and Washington. Prepared by U.S. Fish and Wildlife Service for U.S. Dept. Of Energy, Bonneville Power Administration, Portland, OR.

Rasmussen, L. and P. Wright. 1990d. Wildlife impact assessment, The Dalles Project, Oregon and
Washington. Prepared by U.S. Fish and Wildlife Service for U.S. Dept. of Energy, Bonneville Power Administration, Portland, OR.

Scott, M.J. and E. T. LaRoe. 1993. Status and directions of the Fish and Wildlife Service's Gap Analysis
Program in 1993. Gap Analysis Bulletin No. 3.

Scott, M.J., F. Davis, B. Csuti, R. Noss, B. Butterfield, C. Groves, H. Anderson, S. Caicco, F. D'Erchia,
T. C. Edwards Jr., J. Ulliman, and R.G. Wright. 1993. Gap Analysis: a geographic approach to protection of biological diversity. Wildlife Monograph no. 123.

Scott, M.J. 1994. Preface. National Biological Survey Gap Analysis Program Handbook, University of Idaho, Moscow, ID.

US Department of Agriculture 1996. Status of the interior Columbia basin: summary of scientific
finding. General Technical Report PNW-GTR-385. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, OR
Wissmar, R. C., J.E. Smith, B.A. McIntosh, H.W. Li, G.H. Reeves, J.R. Sedell. 1994. A history of
Resource use and disturbance in riverine basins of Eastern Oregon and Washington (early 1800s-1900s). *NorthwestScience* 68: 1-35.

Section 8. Relationships to other projects

This project is directly related to the Oregon Wildlife Mitigation Coordination, Planning and Implementation. The Oregon Wildife Mitigation is the umbrella project that this project fits under. This project has helped the Burns Paiute create the Stinkingwater project (9701900) as well as new projects being submited by the Burns Paiute Tribe.
The following projects are on-going Bonneville funded wildlife mitigation and watershed projects in Oregon. All of the on-going wildlife projects were used in evaluating the proposed implementation projects that are part of this proposal. Additionally, all of the on-going watershed projects are adjacent to and/or will provide substantial benefits and linkages to the proposed implementation projects.

#9506001 - Confederated Tribes of the Umatilla Indian Reservation –**Squaw Creek Watershed Project – Wildlife Portion**

#9009200 - Confederated Tribes of the Umatilla Indian Reservation – Conforth Ranch – O&M and Enhancement

#9701200 – Confederated Tribes of the Warm Springs Reservation in Oregon – **Crates Point**

#9608000 – Nez Perce Tribe – Northeast Oregon Wildlife Mitigation Project

#9107800 – Oregon Department of Fish and Wildlife – Burlington Bottoms Wildlife Mitigation Project
#9206800 – Oregon Department of Fish and Wildlife – **Willamette Basin Acquisition**

#9205900 – The Nature Conservancy – Amazon Basin/Eugene Wetlands – Phase II

#8402100 - Oregon Department of Fish and Wildlife – **Mainstem, Middle Fork &**

North Fork John Day River – Implementation/O&M

#8402500 - Oregon Department of Fish and Wildlife **– Grande Ronde Habitat Enhancement – Implementation/O&M**

#8710002 - Oregon Department of Fish and Wildlife – **Umatilla Habitat Improvement/ODFW – Implementation/O&M**

#9304000 - Oregon Department of Fish and Wildlife – **Fifteen Mile Creek Habitat Improvement – O&M**

#9404200 - Oregon Department of Fish and Wildlife**- Trout Creek Operation & Maintenance**

#9303000 – SWCD – **Buck Hollow Watershed Enhancement (SWCD)**

#9608500 – Umatilla Basin Watershed Council – **Coordination of Watershed Projects in the Umatilla River Basin**

#8400800 – US Forest Service – **North Fork John Day Habitat Improvement**

#9303800 – US Forest Service – **North Fork John Day Area Riparian Fencing**

#9607700 – US Forest Service – **Meadow Creek Restoration**

#9605300 – US Forest Service/ Confederated Tribes of the Umatilla Indian Reservation – **North Fork John Day River Dredge Tailings Restoration Project**

#9402700 - Grande Ronde Model Watershed Program – **Grande Ronde Model Watershed Habitat Projects**

#9304500 – Oregon Department of Fish and Wildlife – **Buck Hollow Watershed Enhancement**

Section 9. Key personnel

Individuals working on this project will require a wide range of professional skills. All individuals working on this project will meet or exceed specific qualifications needed to implement this project as outlined by the Burns Paiute Tribe.

Section 10. Information/technology transfer

Information will be in the form of Quarterley, Annual reports and public presentation. Burns Paiute Tribe's internal documents are available to the public upon request.